COMMENTS

The enclosed is responsive to the Examiner's Office Action mailed on January 21, 2004. At the time the Examiner mailed the Office Action claims 1-57 were pending. By way of the present response the Applicant has: amended claims 1-16, 24, 26, 30, 34-36, 38-42, 46, 51, 52, 54, and 55. As such, claims 1-57 remain pending. The Applicant respectfully requests reconsideration of the present application and the allowance of all claims. Claim 16 and it's dependent claims have been allowed in substance. The Applicant thanks the Examiner for the allowance of these claims.

The Examiner objected to Claims 3-5, 26-29, 36-45, and 52-57 because of informalities contained in Claims 3, 26, 36, 42, and 52. In response, the Applicant has filed herewith changes to Claims 3, 26, 36, 42, and 52 in which the informalities cited by the Examiner have been corrected. No new matter is being entered as each amendment is supported by the written specification as filed. The Applicant respectfully submits that by way of these changes the objections to the claims should be removed.

The Examiner rejected Claims 6, 9, 10, 24, 30-41, and 46-57 for failing to comply with 35 USC §112, second paragraph as being indefinite. In response, the Applicant has amended Claims 6, 9, 10, 24, 30, 34, 35, 38-41, 46, 51, 52, 54, and 55 in order to place the claims in compliance with 35 USC §112, paragraph 2. The Applicant respectfully submits that by way of these changes the rejections to each of these claims should be removed.

The Examiner rejected independent Claim 1 under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,324,582 (hereinafter "Sridhar"). Claim 1 has been

amended to be more precise. Claim 1 recites (emphasis added):

1) A method, comprising:

regulating a flow of sequentially addressed data across a network between a source node and a destination node by limiting the number of units of said data traversing said network to a set called a window such that:

units are added to said window at such time as their transmission by said source is requested;

units are removed from said window at such time as they arrive at said destination;

units are removed from said window at such time as they are declared to have been lost;

the total number of units within said window is bounded above by said limiting number of units of said data traversing said network;

the difference between the smallest address whose corresponding unit is contained within said window, and the largest address whose corresponding unit is contained within said window, is unbounded; and, <u>units are allowed to be noncontiguous.</u>

The Applicant respectfully submits that Sridhar fails at least to disclose units that are allowed to be non contiguous; and that, as a consequence, Sridhar fails to anticipate independent Claim 1. Therefore independent Claim 1 is allowable over the Sridhar reference.

According to the Examiner's stated reasoning, Col 12, lines 6-39 and Figures 3 & 7 or Sridhar disclose the above concept of separation by way of the retransmission of D62 in Figure 7. See, Examiner's Office Action mailed 1/21/2004, page 5. However, Sridhar's retransmission mechanism is disclosed to be the technique of "Selective Retransmission" (Col. 11, lines 48-50), also commonly known to practitioners as "Selective Acknowledgment". With selective acknowledgment, the window of data which is permitted to be in transit is still required to remain contiguous. That is, if the window size is N units, and unit A fails to arrive at the destination, then unit A+N+1 cannot be transmitted until after unit A has arrived. Even if units A+1 arrives, unit N+A+1 cannot be transmitted until after A arrives.

By contrast, the mechanism of Claim 1 permits the window to be separated into non-contiguous portions which may slide independently. Thus, for a.window of size N units, if unit A fails to arrive, but unit A+1 does arrive, then unit A+N+1 may be transmitted even before unit A is recovered. In this case, the first portion of the window would consist of unit A, while the second portion would consist of units A+2 through A+N+1, with a third portion consisting of unit A+1 no longer belonging to the window.

The Examiner's attention is directed at least to Section 2.0 and Figures 5a, 5b, and 6 of the Applicant's specification in order to gain insight into support that exists in the present application for the above claim language.

The Applicant respectfully submits that independent claim 1 and all of its dependent claims should therefore be allowed.

The Examiner also rejected independent Claim 26 under 35 USC 102(e) as being anticipated by Sridhar. Independent Claim 26, as presently amended, recites (emphasis added):

26. A method, comprising:
   a) sending a message onto a network from a client to a server that requests a portion of an amount of data from said server wherein the total amount of said amount of data that is:
      1) requested by said client from said server through one or more messages and
      2) not received by said client
   is within a limit that controls how much of said amount of data is in transit on said network, said limit being maintained by said client and,
   b) starting a timer at said client that times how long it takes for any piece of said portion to be received at said client; and
   c) sending a second message from said client to said server for another portion of said amount of data, said sending a second message in response to a reception of at least a piece of said portion, said reception occurring no later than an expiration of said timer.

The Applicant respectfully submits that Sridhar fails at least to disclose the above emphasized claim language; and that, as a consequence, Sridhar fails to anticipate

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independent Claim 26. Therefore independent Claim 26 is allowable over the Sridhar reference.

According to the Examiner's reasoning, Sridhar discloses (emphasis added)

> "sending a message onto a network from a client to a
> server that requests a portion of an amount of data
> from the server (see Figure 7) wherein the total
> amount of the amount of data that is requested by the
> client from the server through one or more messages
> and not received by the client is within a limit that
> controls how much of the amount of data is in transit
> on the network, the limit being maintained by the
> client; and sending a second message from the client
> to the server for another portion of the amount of
> data, the sending a second message in response to a
> reception of at least a piece of the portion, the
> reception occurring no later than an expiration of the
> timer, wherein the another portion is the same size as
> the at least a piece of the portion (see col. 12, lines 6-
> 50)." See, Examiner's Office Action mailed 1/21/2004.
> page 6.

The Applicant respectfully submits that Sridhar at least does not disclose the

maintenance by the client of either the limit that controls how much of the amount of

data is in transit or the timer that times how long it takes for any piece of said portion to

be received. The Applicant directs the Examiner's attention to Col. 11, lines 47-50,

where Sridhar refers the use of a "sliding window" similar to TCP with only the

distinction being the use selective acknowledgment. As is commonly known by

practitioners of the art, a sliding window as used by TCP and all other prior art explicitly

teaches that both the limit that controls how much of a quantity of data is in transit and

the timer that times how long it takes for any piece of said portion to be received are

maintained on the server. Bt contrast, Claim 26, parts (a) and (b) respectively, recite

maintaining this information at the client.

The Applicant further respectfully submits that Sridhar does not disclose the sending

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of a second message from the client to the server for another portion of the amount of data. The Applicant directs the Examiner's attention to Col. 11, lines 62-64, where Sridhar describes the second and subsequent messages sent from the gateway computer to the remote communication server as "acknowledgments of the data already received". The distinction between such an acknowledgment and a request for further data is illustrated in Sridhar's Figure 7 in which no second message is generated as a result of the loss of packet D62, but instead the remote communication server causes D62 to be retransmitted without prompting by the gateway computer. By contrast, Claim 26, part (c), recites detecting the loss at the client and sending from the client to the server an explicit request for the retransmission, which the server would not otherwise make.

In light of the above comments the Applicant respectfully submits that claims 26-29 are presently in allowable form and therefore requests their allowance.

The Examiner also rejected independent Claim 30 under 35 USC §102(e) as being Sridhar. Independent Claim 30, as presently amended, recites (emphasis added):

30. A method, comprising:
tracking a plurality of portions of an amount of data over the course of a transaction in which said amount of data is eventually transported from a server to a client, <u>said plurality of portions being tracked by said client</u> consistent with the following set of characteristics:
1) those one or more portions that have been received from said server before the expiration of its timer.
2) those one or more portions for whom a requesting message has been sent onto said network from said client to said server and whose timer has not yet expired.
3) those one or more portions that are neither characteristic 1) or characteristic 2)
wherein when said amount of data is viewed as being contiguous, such that a next piece of said amount of data is adjacent to a piece of said amount of data from the perspective of said piece of said amount of data, a first portion

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having characteristic 1) is between a second and third portions having characteristic 2).

The Applicant respectfully submits that Sridhar fails at least to disclose the above emphasized claim language; and that, as a consequence, Sridhar fails to anticipate independent Claim 30. Therefore independent Claim 30 is allowable over the Sridhar reference.

The Applicant respectfully submits that Sridhar does not disclose the tracking by the client of portions of an amount of data communicating between a client and server. As described at Col. 11, lines 64-67, the "client" computer is communicating with the gateway computer via a standard TCP implementation. Thus the client computer, as described by Sridhar, is not a component of Sridhar's mechanism and maintains no knowledge of the actions of Sridhar's mechanism. With regard to the "gateway computer" illustrated in Figure 7, which is the receiver of the data being sent by Sridhar's mechanism, the function of the gateway computer is limited to the acceptance of data and the transmission of acknowledgments. Sridhar does not describe maintaining at the gateway computer any tracking of portions. To the extent that tracking is described, such function is attributed to the remote communication server at Col. 12 lines 22-28. Claim 30, by contrast, recites performing tracking at the client.

Because independent Claim 30 is allowable as described above, dependent Claims 31-41 are likewise allowable over the Sridhar reference.

The Applicant also respectfully submits that independent claims 42 and 46 are allowable (as are each of their dependent claims) in light of the arguments presented above for claims 26 and 30, respectively.

Therefore all claims are allowable over the cited references; and the Applicant respectfully requests the allowance of the same.

If there are any additional charges, please charge them to our Deposit Account

Number 02-2666. If a telephone conference would facilitate the prosecution of this

application, the Examiner is invited to contact Robert B. O'Rourke at (408) 720-8300.

Respectfully submitted,

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